

# 6EM5

## Beam Power Tube

### 9-PIN MINIATURE TYPE

#### GENERAL DATA

##### Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC) . . . . .	6.3	volts
Current . . . . .	0.8	amp

Direct Interelectrode Capacitances:<sup>a</sup>

Grid No.1 to plate. . . . .	0.7 max.	$\mu\mu\text{f}$
Grid No.1 to cathode & grid No.3, grid No.2, and heater . . . . .	10	$\mu\mu\text{f}$
Plate to cathode & grid No.3, grid No.2, and heater . . . . .	5.1	$\mu\mu\text{f}$

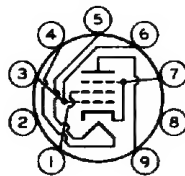
##### Characteristics, Class A<sub>1</sub> Amplifier:

Plate Voltage . . . . .	60	250	volts
Grid-No.2 Voltage . . . . .	250	250	volts
Grid-No.1 Voltage . . . . .	0	-18	volts
Mu Factor, Grid No.1 to Grid No.2 . . . . .	-	8.7	
Plate Resistance (Approx.) . . . . .	-	0.05	megohm
Transconductance . . . . .	-	5100	$\mu\text{mhos}$
Plate Current . . . . .	180 <sup>b</sup>	40	ma
Grid-No.2 Current . . . . .	30 <sup>b</sup>	3	ma
Grid-No.1 Voltage (Approx.) for plate ma. = 0.2 . . . . .	-	-37	volts

##### Mechanical:

Operating Position . . . . .	Any
Maximum Overall Length . . . . .	3-1/16"
Maximum Seated Length . . . . .	2-13/16"
Length, Base Seat to Bulb Top (Excluding tip) . . . . .	2-7/16" $\pm$ 3/32"
Diameter . . . . .	0.750" to 0.850"
Dimensional Outline . . . . .	See <i>General Section</i>
Bulb . . . . .	T6-1/2
Base . . . . .	Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW . . . . .	9HN

Pin 1-Grid No.2  
Pin 2-No Connec-  
tion  
Pin 3-Grid No.1  
Pin 4-Heater  
Pin 5-Heater  
Pin 6-Grid No.1



Pin 7-Cathode,  
Grid No.3  
Pin 8-Internal  
Connection—  
Do Not Use  
Pin 9-Plate

#### VERTICAL-DEFLECTION AMPLIFIER

Maximum Ratings, Design-Center Values Except as Noted:

*For operation in a 525-line, 30-frame system<sup>c</sup>*

DC PLATE VOLTAGE . . . . .	315 max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE (Absolute maximum) <sup>d</sup> . . . . .	2200 <sup>e</sup> max.	volts

← Indicates a change.



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DC GRID-No.2 (SCREEN-GRID) VOLTAGE. . . .	285	max.	volts	
PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL-GRID) VOLTAGE. . . . .	250	max.	volts	—
CATHODE CURRENT:				
Peak. . . . .	210	max.	ma	
Average . . . . .	60	max.	ma	
GRID-No.2 INPUT . . . . .	1.5	max.	watts	
PLATE DISSIPATION . . . . .	10	max.	watts	
PEAK HEATER-CATHODE VOLTAGE:				
Heater negative with respect to cathode.	200	max.	volts	—
Heater positive with respect to cathode.	200 <sup>f</sup>	max.	volts	
BULB TEMPERATURE (At hottest point on bulb surface). . . . .	250	max.	°C	

## Maximum Circuit Values:

### Grid-No.1-Circuit Resistance:

For fixed-bias operation. . . . .	2.2	max.	megohms	—
For cathode-bias operation. . . . .	2.2	max.	megohms	

<sup>a</sup> Without external shield.

<sup>b</sup> This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

<sup>c</sup> As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

<sup>d</sup> This rating is applicable when the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

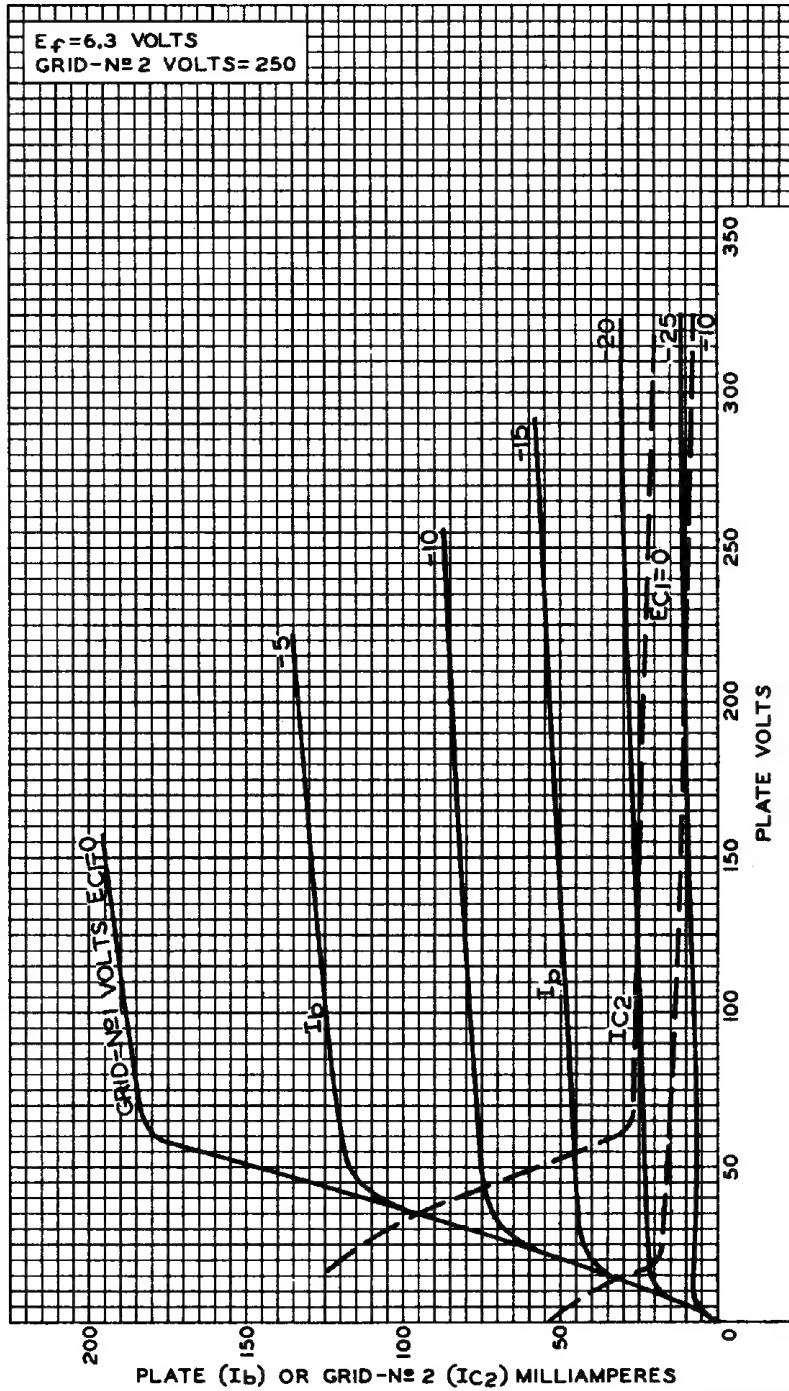
<sup>e</sup> Under no circumstances should this absolute-maximum value be exceeded.

<sup>f</sup> The dc component must not exceed 100 volts.



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## AVERAGE CHARACTERISTICS



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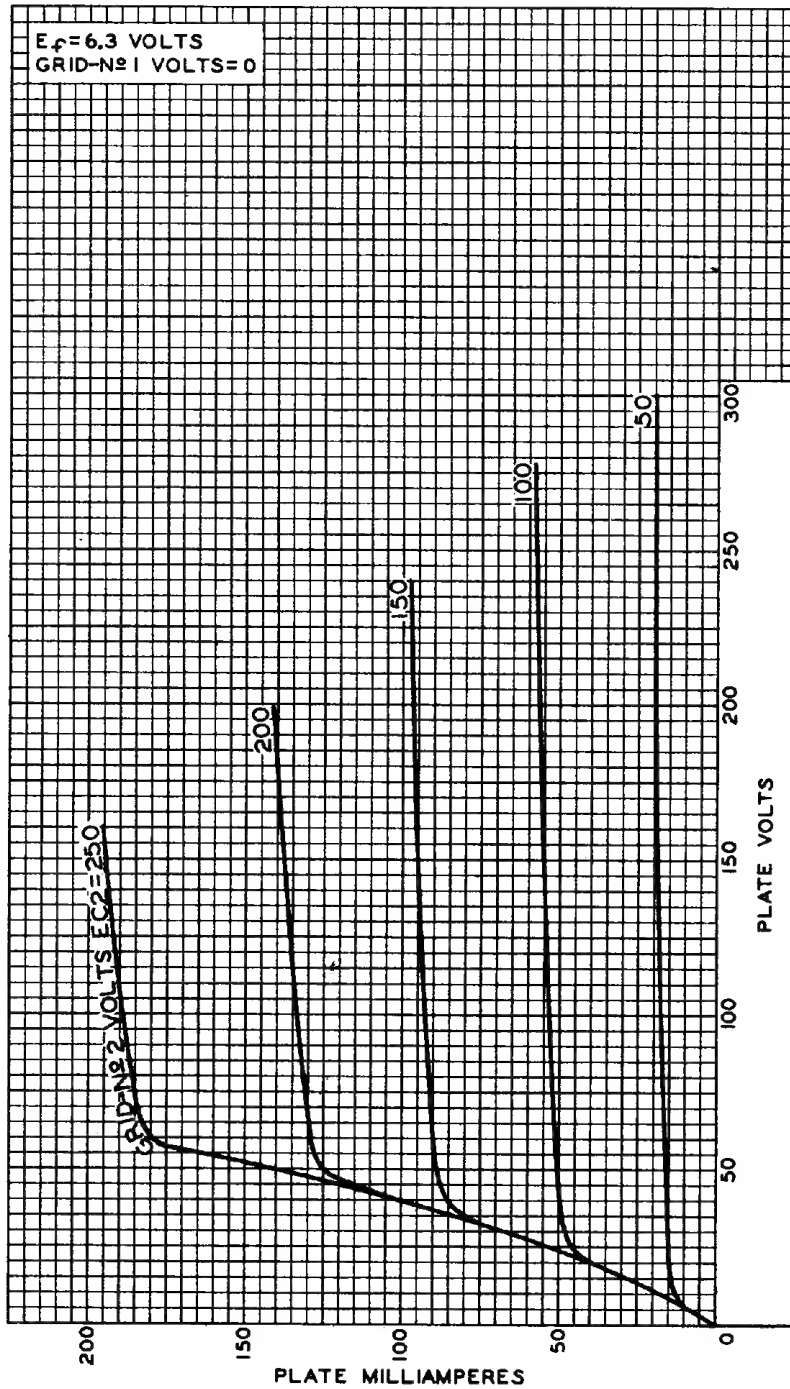


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## AVERAGE PLATE CHARACTERISTICS



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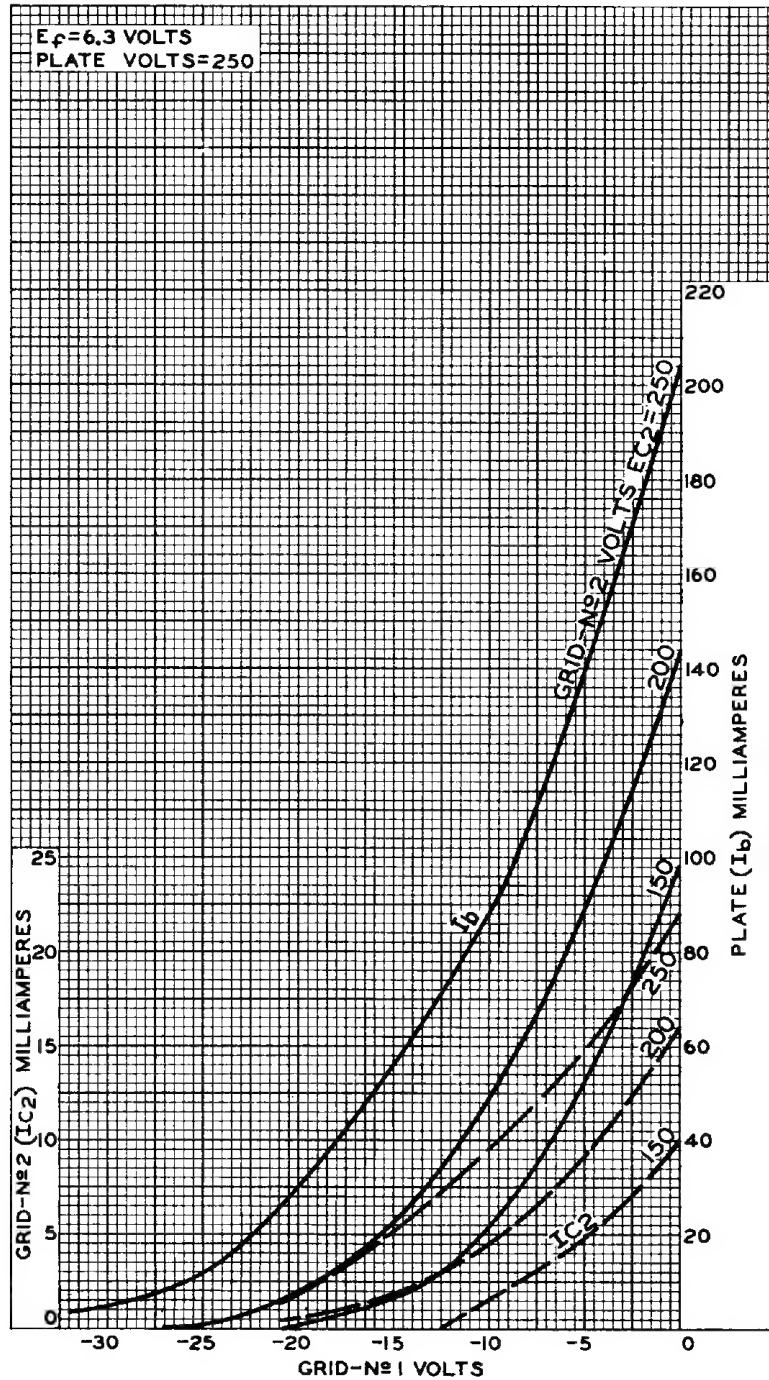
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## AVERAGE CHARACTERISTICS



92CM-9673RI



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